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CLAIMS

1. A method for contactless application of a coating on a three dimensionally distributed surface (14;24;34;44;54;74;84;104), said method comprising
5 applying electrically charged particles (15;25;35;55;65;75;85;105) in such positions on said surface as to form a predetermined pattern, by
 guiding each of said particles individually to a predetermined position on said surface by means of an
10 adjustable electric field (12;22;32;42;52;72;82;102) having flux lines with a longitudinal direction extending through said surface, whereby said particles form said coating according to said predetermined pattern on said surface.
- 15 2. A method according to claim 1, wherein said electric field is applied such that at least some of its flux lines cross said surface.
- 20 3. A method according to claim 1 or 2, wherein said longitudinal direction of said flux lines extend through said surface at an angle in the interval between 60° and 120°.
- 25 4. A method according to any one of the preceding claims, further comprising
 adjusting the distribution of said electric field in order to control the positions at which said particles are applied on said surface.
- 30 5. A method according to any one of the preceding claims, further comprising
 adjusting the relative positions of a means (10;20;30;40;50;60;70;80;100) for ejecting said particles
35 and said surface in order to control the positions at which said particles are applied on said surface.

6. A method according to any one of the preceding claims, further comprising

adjusting the relative motion of a means
5 (10;20;30;40;50;60;70;80;100) for ejecting said particles and said surface in order to control the positions at which said particles are applied on said surface.

7. A method according to any one of the preceding
10 claims, wherein said electric field is applied over said surface between an electrode (11;21;31;41;51;71;101) and a means (10;20;30;40;50;60;70;80;100) for ejecting said particles.

15 8. A method according to claim 7, wherein said electrode is formed by an object comprising said surface.

9. A method according to claim 7, wherein said
surface is arranged between said electrode and said means
20 for ejecting said particles.

10. A method according to any one of claims 7 to 9, further comprising

moving the position of said electrode in relation to
25 the position of said surface in order to control the positions in which said particles are applied on said surface.

11. A method according to any one of the preceding
30 claims, wherein said particles are in the form of viscous droplets.

12. A method according to claim 11, wherein said
droplets comprise ink.

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13. A method according to any one of the preceding claims, wherein said particles comprise ink.

14. A method according to any one of the preceding claims, wherein said particles are applied by means of inkjet printing.

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15. A method according to any one of the preceding claims, wherein said coating is an image.

16. A method according to claim 15, wherein the
10 method further comprises

starting from image information representing said image, and information representing said surface, transforming said image information into a compensated image information, and

15 transferring said image in accordance with said compensated image information to said surface by means of contactless application.

17. A method according to claim 16, wherein said
20 image information is transformed such that distortion in the form of non-uniform stretching of said image on said surface is reduced.

18. A device for applying a coating on a three
25 dimensionally distributed surface (14;24;34;44;54;74;84;104), said device comprising

means (10;20;30;40;50;60;70;80;100) for ejecting electrically charged particles (15;25;35;55;65;75;85;105),

30 an electrode (11;21;31;41;51;71;101) for forming an electric field (12;22;32;42;52;72;82;102) between the electrode and said means for ejecting said particles, wherein said electric field has flux lines with a longitudinal direction extending through said surface in
35 order to guide said particles to said surface so that they form said coating, and

means for predetermining a pattern according to which said particles are arranged to form said coating.

19. A device according to claim 18, wherein said
5 flux lines cross said surface.

20. A device according to claim 18 or 19, wherein said means for ejecting said particles is arranged to eject said particles in a direction essentially towards
10 said surface.

21. A device according to any one of claims 18 to 20, further comprising
a control means (36;46;106) being arranged to adjust
15 said electric field in order to control the positions in which said particles are applied on said surface.

22. A device according to claim 21, wherein said control means further is arranged to control ejection of
20 said particles by said means for ejecting said particles.

23. A device according to claim 21 or 22, wherein said control means further is arranged to control the position of said surface in relation to said means for
25 ejecting said particles in order to control the positions in which said particles are applied on said surface.

24. A device according to any one of claims 21 to 23, wherein said control means further is arranged to
30 control the motion of said surface in relation to said means for ejecting said particles in order to control the positions in which said particles are applied on said surface.

35 25. A device according to any one of claims 21 to 24, wherein said control means further is arranged to control the position of said surface in relation to said

electrode in order to control the positions in which said particles are applied on said surface.

26. A device according to any one of claims 18 to
5 25, wherein said particles are in the form of viscous droplets.

27. A device according to claim 26, wherein said droplets comprise ink.

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28. A device according to any one of claims 18 to 27, wherein said particles comprise ink.

29. A device according to any one of claims 18 to
15 28, wherein said means for ejecting electrically charged particles comprises an inkjet printing nozzle (13;23;33;43;53;63).

30. A device according to any one of claims 18 to
20 29, wherein said coating is an image.

31. A device according to claim 30, further comprising

means for transforming, starting from image
25 information representing said image and information representing said surface, said image information into a compensated image information, and

means for transferring said image in accordance with said compensated image information to said surface by
30 means of contactless application.